

# **A meta-analysis of potential prognostic biomarkers in coronavirus disease 2019 (2019-nCoV)**

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## **APPENDIX**

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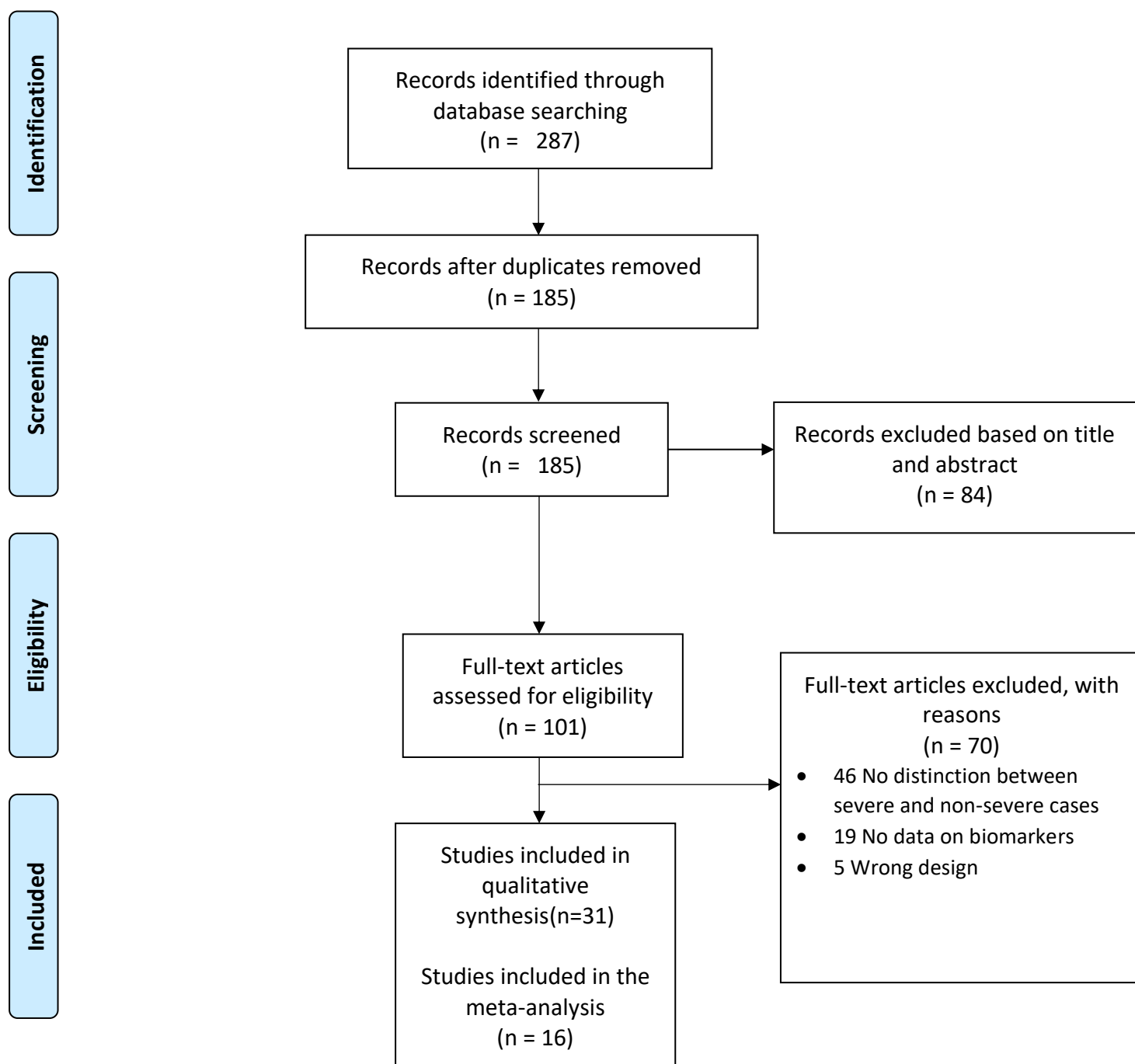
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*Supplementary table 1. Search strategy in PubMed and EMBASE*

<b>Search</b>	<b>Search terms</b>
#1	COVID [tiab] OR "novel coronavirus"[tiab]
#2	Clinical features[tiab] OR clinical profil[tiab]
#3	blood disorders[MeSH Terms]
#4	#1 AND #2
#5	#1 AND #3
#6	#4 OR #5
Date: 18 April 2020 , restriction: 2019 and 2020	

*Supplementary table 2. Search strategy in EMBASE*

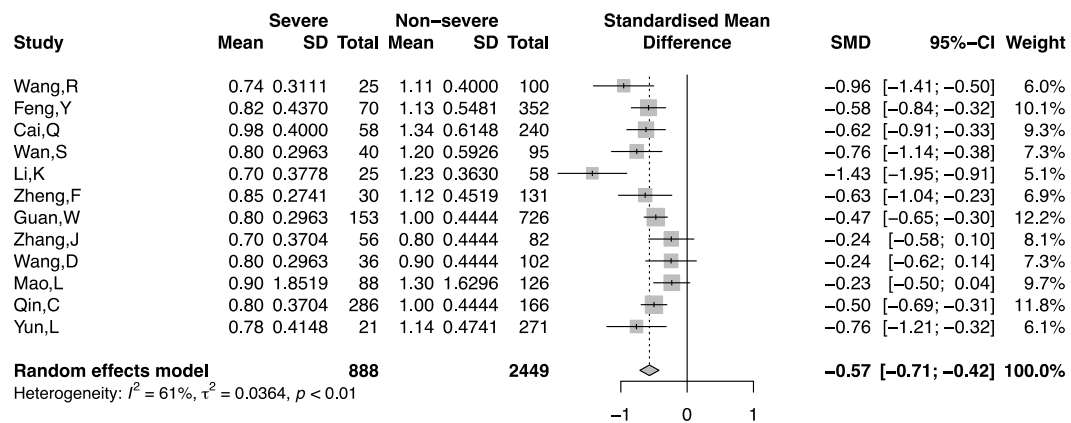
<b>Search</b>	<b>Search terms</b>
#1	covid OR 'novel coronavirus'
#2	clinical OR features OR profil
#3	blood AND disorders
#4	#1 AND #2
#5	#1 AND #3
#6	#4 OR #5
Date: 18 April 2020 , restriction: 2019 and 2020	



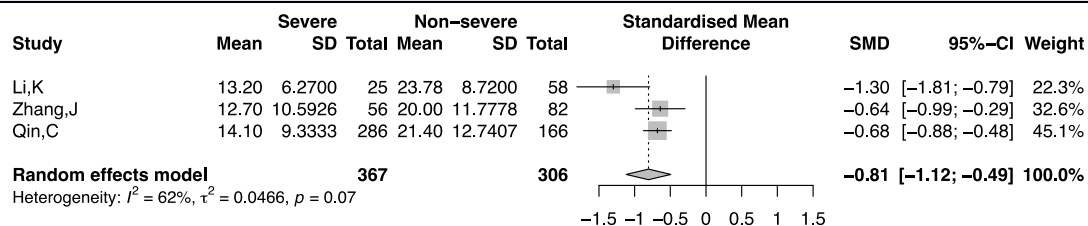
# I. Forest plot of studies reporting mean and standard deviation (or interquartile range) of biomarkers in severe and non-severe groups

## Meta-analysis of routine blood biomarkers

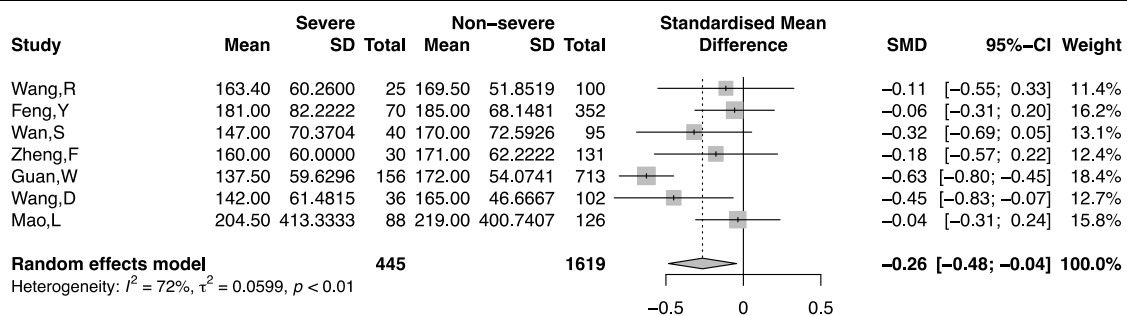
### Lymphocytes count



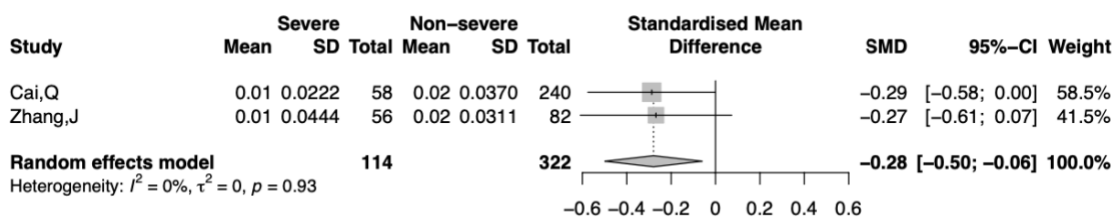
### Lymphocytes %



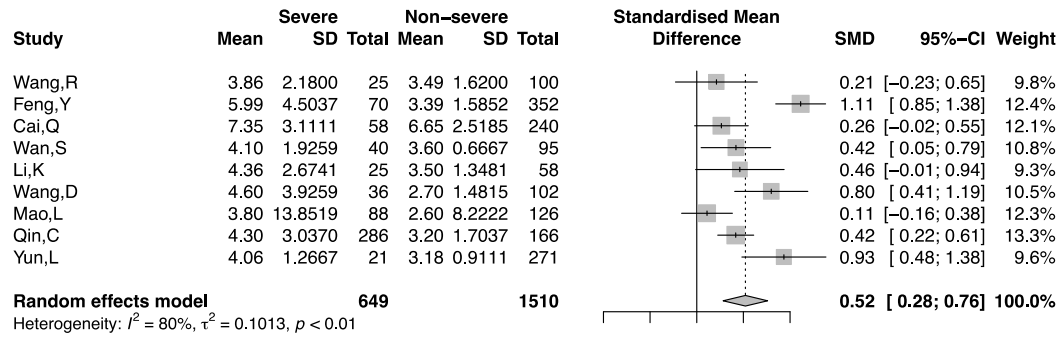
### Thrombocytes



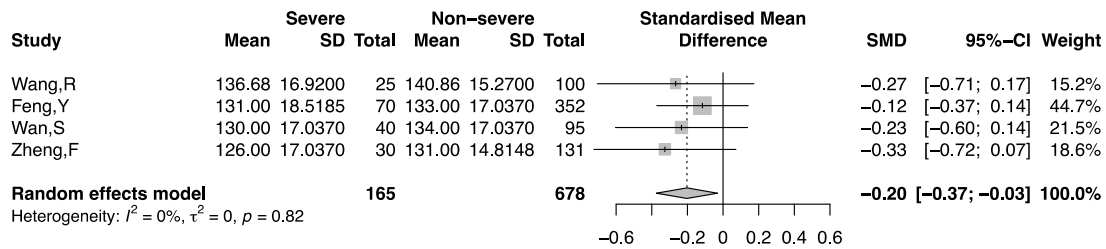
### Eosinophils



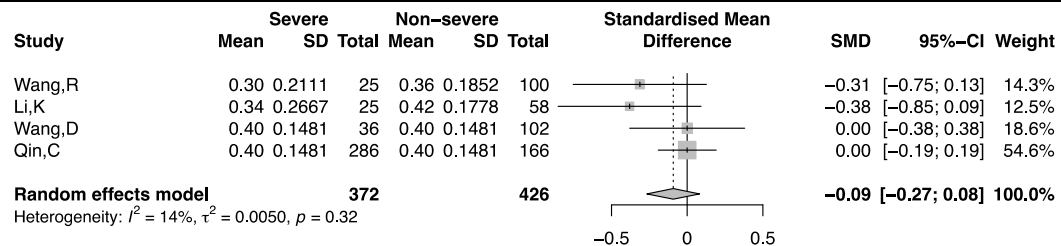
### Neutrophils



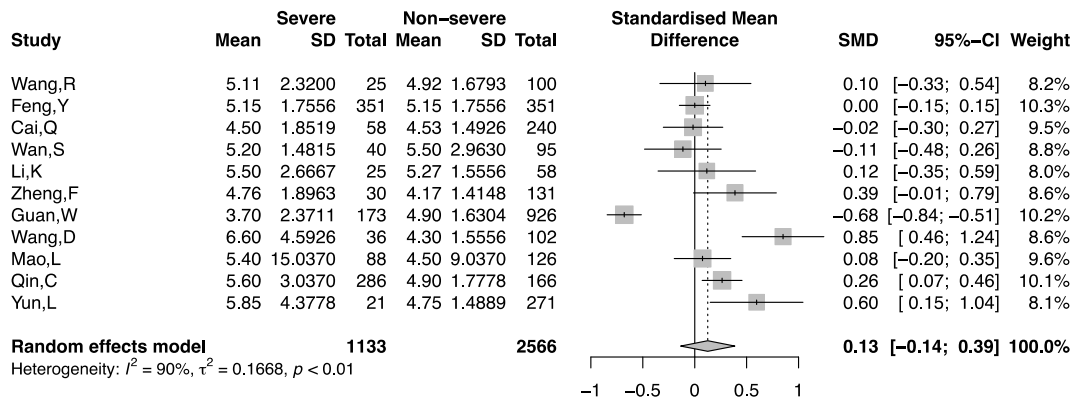
## Haemoglobin



## Monocytes

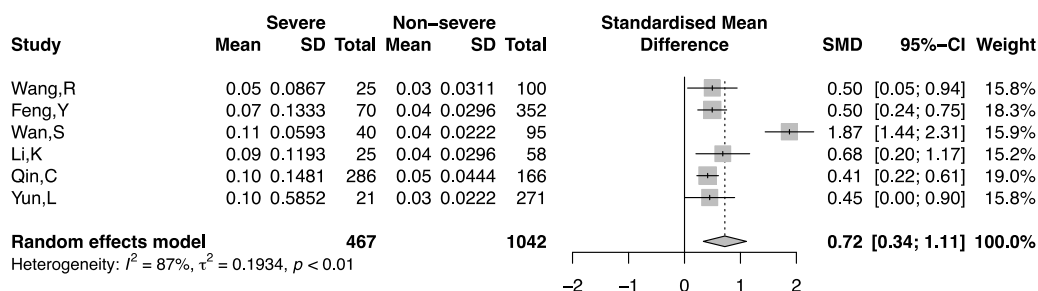


## White Blood Cells

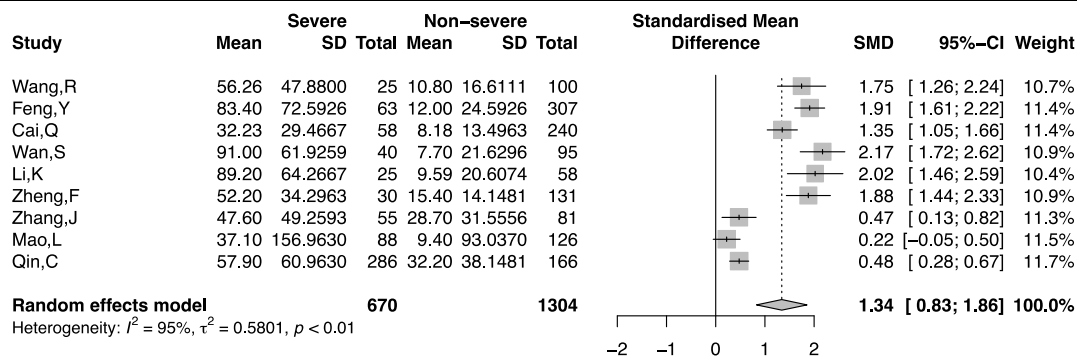


## Meta-analysis of Inflammation biomarkers

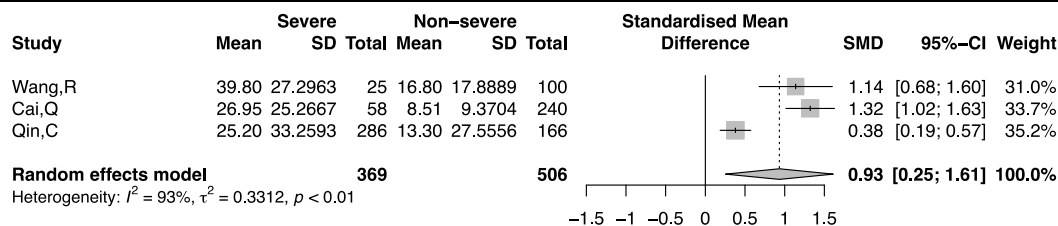
### Procalcitonin



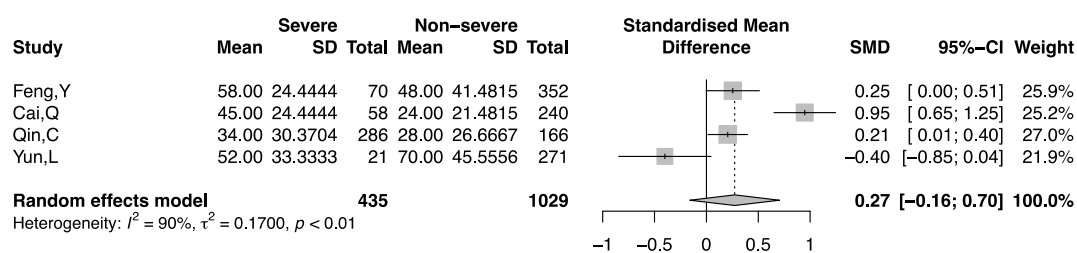
## C-reactive protein



## Interleukin-6



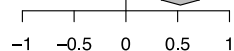
## Erythrocytes sedimentation rate



## Meta-analysis of biochemical biomarkers

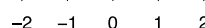
### ALAT

Study	Mean	Severe		Non-severe		Standardised Mean Difference	SMD	95%-CI	Weight
		SD	Total	Mean	SD Total				
Cai,Qi	67.00	39.2593	85	41.00	31.1111	233	0.77	[ 0.52; 1.03]	11.8%
Wang,R	25.00	12.9630	25	24.00	18.3333	100	0.06	[ -0.38; 0.50]	8.2%
Feng,Y	35.00	20.7407	70	23.00	17.0370	352	0.68	[ 0.42; 0.94]	11.7%
Cai,Q	26.85	15.4074	58	20.00	11.2963	240	0.56	[ 0.27; 0.85]	11.1%
Wan,S	26.60	13.9259	40	21.70	16.3704	95	0.31	[ -0.06; 0.68]	9.4%
Zheng,F	23.90	13.1111	30	19.30	2.3704	131	0.76	[ 0.36; 1.17]	8.8%
Zhou,F	40.00	20.0000	54	27.00	18.5185	135	0.68	[ 0.36; 1.01]	10.4%
Wang,D	35.00	28.1481	36	23.00	15.5556	102	0.61	[ 0.22; 1.00]	9.2%
Mao,L	32.50	1428.1481	88	23.00	188.8889	126	0.01	[ -0.26; 0.28]	11.4%
Yun,L	32.00	24.4444	21	21.00	12.5926	271	0.80	[ 0.35; 1.25]	8.1%
<b>Random effects model</b>						<b>507</b>	<b>1785</b>	<b>0.53 [ 0.34; 0.71]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 68\%$ , $\tau^2 = 0.0597$ , $p < 0.01$									



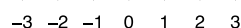
## ASAT

Study	Mean	Severe		Non-severe		Standardised Mean Difference	SMD	95%-CI	Weight
		SD	Total	Mean	SD Total				
Cai,Qi	58.00	38.5185	85	34.00	13.3333	233	1.05	[ 0.78; 1.31]	11.7%
Wang,R	29.00	9.6296	25	26.00	10.3704	100	0.29	[ -0.15; 0.73]	10.6%
Feng,Y	39.00	17.7778	70	25.00	11.1111	352	1.12	[ 0.85; 1.39]	11.7%
Cai,Q	36.00	15.0370	58	26.00	9.6296	240	0.92	[ 0.62; 1.21]	11.5%
Wan,S	33.60	13.7037	40	22.40	10.0741	95	0.99	[ 0.60; 1.38]	11.0%
Zheng,F	31.60	17.3778	30	23.40	7.2593	131	0.82	[ 0.42; 1.23]	10.8%
Wang,D	52.00	29.6296	36	29.00	12.5926	102	1.23	[ 0.83; 1.64]	10.8%
Mao,L	34.00	6061.4815	88	23.00	174.0741	126	0.00	[ -0.27; 0.28]	11.6%
Yun,L	47.00	20.7407	21	23.00	8.8889	271	2.36	[ 1.87; 2.84]	10.3%
<b>Random effects model</b>						<b>453</b>	<b>1650</b>	<b>0.96 [ 0.58; 1.34]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 91\%$ , $\tau^2 = 0.3033$ , $p < 0.01$									



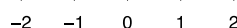
## Albumin

Study	Mean	Severe		Non-severe		Standardised Mean Difference	SMD	95%-CI	Weight
		SD	Total	Mean	SD Total				
Feng,Y	32.25	4.7926	70	39.14	5.5926	352	-1.26	[ -1.53; -0.99]	26.1%
Wan,S	36.00	4.0741	40	49.90	4.5926	95	-3.11	[ -3.64; -2.58]	23.7%
Zhou,F	29.10	3.5556	54	33.60	4.2963	137	-1.09	[ -1.43; -0.76]	25.6%
Yun,L	35.80	4.6000	21	40.90	3.8000	271	-1.32	[ -1.77; -0.86]	24.5%
<b>Random effects model</b>						<b>185</b>	<b>855</b>	<b>-1.67 [ -2.40; -0.94]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 93\%$ , $\tau^2 = 0.5095$ , $p < 0.01$									



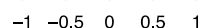
## CK

Study	Mean	Severe		Non-severe		Standardised Mean Difference	SMD	95%-CI	Weight
		SD	Total	Mean	SD Total				
Feng,Y	93.00	143.7037	70	80.00	61.4815	352	0.16	[ -0.10; 0.42]	15.2%
Cai,Q	87.00	88.0741	58	64.50	34.8148	240	0.45	[ 0.16; 0.74]	14.9%
Wan,S	82.00	66.5926	40	57.00	37.0370	95	0.52	[ 0.15; 0.90]	14.1%
Zheng,F	100.30	249.8519	30	68.70	50.4444	131	0.27	[ -0.13; 0.67]	13.8%
Wang,D	102.00	140.7407	36	87.00	49.6296	102	0.18	[ -0.20; 0.56]	14.0%
Mao,L	83.00	9042.3704	88	59.00	919.2593	126	0.00	[ -0.27; 0.28]	15.0%
Yun,L	227.00	236.2963	21	77.50	45.7778	271	1.96	[ 1.49; 2.43]	13.0%
<b>Random effects model</b>						<b>343</b>	<b>1317</b>	<b>0.48 [ 0.10; 0.87]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 89\%$ , $\tau^2 = 0.2342$ , $p < 0.01$									



## CK-MB

Study	Mean	Severe		Non-severe		Standardised Mean Difference	SMD	95%-CI	Weight
		SD	Total	Mean	SD Total				
Feng,Y	15.50	8.3333	70	12.75	4.3556	352	0.53	[ 0.27; 0.78]	34.5%
Cai,Q	1.13	0.8593	58	0.76	0.3556	240	0.75	[ 0.45; 1.04]	29.6%
Wang,D	18.00	17.0370	36	13.00	2.9630	102	0.55	[ 0.17; 0.94]	20.1%
Yun,L	17.10	10.4444	21	12.50	3.6296	271	1.03	[ 0.58; 1.48]	15.7%
<b>Random effects model</b>						<b>185</b>	<b>965</b>	<b>0.68 [ 0.48; 0.87]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 30\%$ , $\tau^2 = 0.0122$ , $p = 0.23$									



## Troponin

Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Wang,D	11.00	15.4074	36	5.10	5.7037	102		0.64	[0.25; 1.02]	57.3%
Yun,L	0.04	0.0459	21	0.02	0.0207	271		0.81	[0.36; 1.26]	42.7%
<b>Random effects model</b>			<b>57</b>	<b>373</b>				<b>0.71</b>	<b>[0.42; 1.00]</b>	<b>100.0%</b>
Heterogeneity: $i^2 = 0\%$ , $\tau^2 = 0$ , $p = 0.56$										

## Creatinemia

Study	Mean	Severe		Non-severe		Standardised Mean Difference	SMD	95%-CI	Weight	
		SD	Total	Mean	SD					Total
Wang,R	67.32	16.8100	25	64.50	15.9970	100		0.17	[-0.27; 0.61]	9.6%
Feng,Y	67.95	19.2963	70	65.46	17.5556	352		0.14	[-0.12; 0.40]	16.5%
Cai,Q	72.00	31.8519	58	61.00	17.7778	240		0.52	[0.23; 0.81]	14.9%
Wan,S	63.50	16.8889	40	66.00	17.7778	95		-0.14	[-0.51; 0.23]	11.7%
Zheng,F	47.50	18.5185	30	48.30	14.1481	131		-0.05	[-0.45; 0.34]	10.8%
Wang,D	80.00	29.6296	36	71.00	19.2593	102		0.40	[0.02; 0.78]	11.3%
Mao,L	71.60	6962.2963	88	65.60	140.5185	126		0.00	[-0.27; 0.27]	15.7%
Yun,L	72.30	43.8519	21	63.00	18.2222	271		0.44	[0.00; 0.89]	9.4%
<b>Random effects model</b>			<b>368</b>	<b>1417</b>				<b>0.18</b>	<b>[0.01; 0.35]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 49\%$ , $\tau^2 = 0.0290$ , $p = 0.06$										

## Blood urea nitrogen

Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Wang,R	4.61	2.2800	25	3.90	1.2000	100		0.48	[0.03; 0.92]	17.6%
Feng,Y	5.65	2.5407	70	4.60	1.4741	352		0.62	[0.36; 0.88]	21.5%
Cai,Q	5.20	1.8889	58	3.84	1.2074	240		0.99	[0.69; 1.29]	20.8%
Wang,D	5.90	3.9259	36	4.00	1.4815	102		0.80	[0.41; 1.19]	18.7%
Mao,L	4.60	34.5185	88	3.80	8.9630	126		0.03	[-0.24; 0.31]	21.3%
<b>Random effects model</b>			<b>277</b>			<b>920</b>		<b>0.58</b>	<b>[0.23; 0.93]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 83\%$ , $\tau^2 = 0.1321$ , $p < 0.01$										

## Total bilirubin

Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Cai,Qi	22.00	7.4074	85	19.00	9.6296	233		0.33	[0.08; 0.58]	20.5%
Wang,R	10.40	8.0741	25	9.25	5.5741	100		0.19	[-0.25; 0.62]	9.1%
Feng,Y	12.20	6.0000	70	9.50	4.4444	352		0.57	[0.31; 0.83]	19.6%
Cai,Q	11.25	7.3333	58	10.90	5.5556	240		0.06	[-0.23; 0.35]	17.2%
Wan,S	9.80	5.7778	40	8.60	6.2222	95		0.20	[-0.17; 0.57]	11.9%
Zheng,F	12.70	5.7037	30	10.70	5.2741	131		0.37	[-0.03; 0.77]	10.6%
Wang,D	11.50	6.6667	36	9.30	3.4074	102		0.49	[0.10; 0.87]	11.2%
<b>Random effects model</b>			<b>344</b>	<b>1253</b>					<b>0.32</b>	<b>[0.18; 0.47]</b>
Heterogeneity: $I^2 = 28\%$ , $\tau^2 = 0.0106$ , $p = 0.22$										

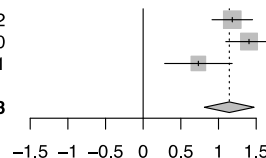
## LDH

Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Feng,Y	378.00	183.7037	70	236.00	90.3704	352		1.27	[1.00; 1.55]	14.7%
Cai,Q	387.00	273.3333	58	216.00	132.5926	240		1.01	[0.71; 1.31]	14.6%
Wan,S	309.00	114.4444	40	212.00	58.8889	95		1.22	[0.82; 1.61]	14.2%
Zheng,F	226.20	90.0741	30	162.00	55.4074	131		1.01	[0.60; 1.42]	14.2%
Wang,D	435.00	217.7778	36	212.00	88.8889	102		1.65	[1.22; 2.08]	14.1%
Mao,L	302.00	650.2222	88	215.00	670.7407	126		0.13	[-0.14; 0.40]	14.7%
Yun,L	454.00	138.5185	21	224.00	58.8889	271		3.40	[2.88; 3.92]	13.6%
<b>Random effects model</b>			<b>343</b>	<b>1317</b>					<b>1.36</b>	<b>[0.75; 1.98]</b>
Heterogeneity: $I^2 = 95\%$ , $\tau^2 = 0.6609$ , $p < 0.01$										



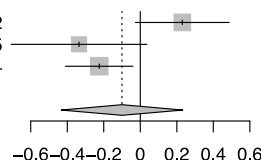
## Myoglobin

Study	Mean	Severe SD Total	Non-severe Mean SD Total	Standardised Mean Difference	SMD	95%-CI	Weight
Feng,Y	52.05	57.6519 70	11.70 27.0741 352		1.18	[0.91; 1.45]	38.2%
Cai,Q	67.90	49.5926 58	33.52 12.2741 240		1.41	[1.10; 1.71]	35.4%
Yun,L	32.10	133.0370 21	5.90 7.3333 271		0.73	[0.29; 1.18]	26.4%
<b>Random effects model</b>		<b>149</b>	<b>863</b>		<b>1.14</b>	<b>[0.81; 1.47]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 66\%$ , $\tau^2 = 0.0554$ , $p = 0.05$							



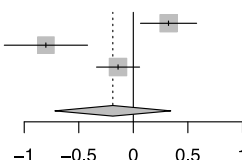
## Potassium

Study	Mean	Severe SD Total	Non-severe Mean SD Total	Standardised Mean Difference	SMD	95%-CI	Weight
Feng,Y	4.00	0.6667 70	3.90 0.3704 352		0.23	[-0.03; 0.49]	34.2%
Wan,S	3.80	0.5926 40	4.00 0.5926 95		-0.34	[-0.71; 0.04]	27.9%
Guan,W	3.80	0.4444 138	3.90 0.4444 614		-0.22	[-0.41; -0.04]	37.9%
<b>Random effects model</b>		<b>248</b>	<b>1061</b>		<b>-0.10</b>	<b>[-0.43; 0.23]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 79\%$ , $\tau^2 = 0.0671$ , $p < 0.01$							



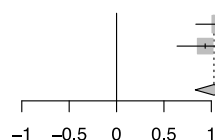
## Sodium

Study	Mean	Severe SD Total	Non-severe Mean SD Total	Standardised Mean Difference	SMD	95%-CI	Weight
Feng,Y	140.00	3.7037 70	139.00 2.9630 352		0.32	[0.06; 0.58]	33.9%
Wan,S	136.50	3.7037 40	139.00 2.8148 95		-0.80	[-1.18; -0.42]	31.0%
Guan,W	138.00	2.9630 121	138.40 2.8148 536		-0.14	[-0.34; 0.06]	35.1%
<b>Random effects model</b>		<b>231</b>	<b>983</b>		<b>-0.19</b>	<b>[-0.72; 0.34]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 91\%$ , $\tau^2 = 0.1992$ , $p < 0.01$							



## γ-GT

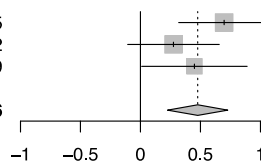
Study	Mean	Severe SD Total	Non-severe Mean SD Total	Standardised Mean Difference	SMD	95%-CI	Weight
Cai,Qi	92.00	80.0000 85	40.00 26.6667 233		1.10	[0.84; 1.36]	56.0%
Cai,Q	35.25	22.5185 58	21.00 12.8519 240		0.94	[0.64; 1.23]	44.0%
<b>Random effects model</b>		<b>143</b>	<b>473</b>		<b>1.03</b>	<b>[0.83; 1.22]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 0\%$ , $\tau^2 = 0$ , $p = 0.41$							



## Meta-analysis of Blood clotting biomarkers

### Prothrombin time

Study	Mean	Severe SD Total	Non-severe Mean SD Total	Standardised Mean Difference	SMD	95%-CI	Weight
Wan,S	11.30	0.8148 40	10.80 0.6667 95		0.70	[0.32; 1.08]	36.1%
Wang,D	13.20	1.6296 36	12.90 0.8148 102		0.28	[-0.11; 0.66]	35.7%
Han,H	12.65	1.1300 35	12.20 0.8800 49		0.45	[0.01; 0.89]	28.1%
<b>Random effects model</b>		<b>111</b>	<b>246</b>		<b>0.48</b>	<b>[0.23; 0.73]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 16\%$ , $\tau^2 = 0.0080$ , $p = 0.30$							



### D-dimer

Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Feng,Y	1.11	2.5852	70	0.51	0.5630	352		0.51	[ 0.25; 0.77]	16.9%
Cai,Q	0.56	0.4222	58	0.36	0.2000	240		0.77	[ 0.48; 1.07]	15.9%
Wan,S	0.60	0.5185	40	0.30	0.2222	95		0.88	[ 0.50; 1.27]	13.5%
Wang,D	414.00	839.2593	36	166.00	136.2963	102		0.56	[ 0.17; 0.94]	13.4%
Han,H	19.11	35.4800	35	2.14	2.8800	49		0.73	[ 0.28; 1.18]	11.9%
Mao,L	0.90	14.7407	88	0.40	6.2963	126		0.05	[ -0.23; 0.32]	16.5%
Yun,L	1.00	6.0815	21	0.41	0.3037	271		0.36	[ -0.08; 0.81]	12.0%
Random effects model			348	1235				0.54	[ 0.31; 0.77]	100.0%
Heterogeneity: $I^2 = 69\%$ , $\tau^2 = 0.0654$ , $p < 0.01$										

## Activated partial thromboplastin





Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Wan,S	29.70	12.4296	40	26.60	3.1852	95		0.43	[ 0.05; 0.80]	26.3%
Huang,C	29.53	3.4800	53	27.70	6.8889	28		0.37	[ -0.09; 0.83]	23.5%
Wang,D	30.40	4.0741	36	31.70	2.8889	102		-0.40	[ -0.78; -0.02]	26.0%
Han,H	29.53	3.4800	35	28.56	2.6600	49		0.32	[ -0.12; 0.75]	24.3%
<b>Random effects model</b>			<b>164</b>	<b>274</b>				<b>0.17</b>	<b>[ -0.23; 0.57]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 74\%$ , $\tau^2 = 0.1234$ , $p < 0.01$										

## Fibrinogen

Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Han,H	4.76	1.7301	35	5.10	1.1600	49		-0.24	[-0.67; 0.20]	50.3%
Yun,L	4.72	1.0074	21	4.26	1.0815	271		0.43	[-0.02; 0.87]	49.7%
<b>Random effects model</b>			<b>56</b>					<b>0.09</b>	<b>[-0.56; 0.74]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 77\%$ , $\tau^2 = 0.1691$ , $p = 0.04$										

## Meta-analysis of studies reporting survivor and non-survivors with mean of biomarkers

### Lymphocytes

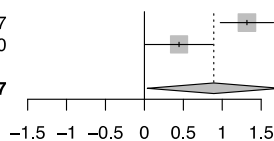
Study	Non-survivor			Survivor			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Zhou,F	0.60	0.2222	54	1.10	0.5185	137		-1.09	[-1.43; -0.76]	37.5%
Wu,C	0.59	0.1926	44	0.80	0.4519	40		-0.61	[-1.05; -0.17]	33.5%
Yang,X	0.62	0.3700	32	0.70	0.4000	20		-0.21	[-0.77; 0.35]	28.9%
<b>Random effects model</b>			<b>130</b>	<b>197</b>				<b>-0.67</b>	<b>[-1.18; -0.17]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 75\%$ , $\tau^2 = 0.1476$ , $p = 0.02$										

### CD3+ T

Study	Severe			Non-severe			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Qin,C	461.60	264.7000	286	663.80	291.3000	166		-0.73	[-0.93; -0.54]	83.9%
Yun,L	421.00	311.8519	21	776.00	369.0370	271		-0.97	[-1.42; -0.52]	16.1%
<b>Random effects model</b>			<b>307</b>	<b>437</b>				<b>-0.77</b>	<b>[-0.95; -0.59]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 0\%$ , $\tau^2 = 0$ , $p = 0.35$										

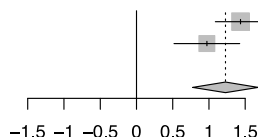
### White blood cells

Study	Non-survivor			Survivor			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Zhou,F	9.80	5.1852	54	5.20	2.5185	137		1.32	[0.97; 1.66]	51.2%
Wu,C	8.61	4.1037	44	6.62	4.7704	40		0.44	[0.01; 0.88]	48.8%
<b>Random effects model</b>			<b>98</b>	<b>177</b>				<b>0.89</b>	<b>[0.04; 1.75]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 90\%$ , $\tau^2 = 0.3407$ , $p < 0.01$										




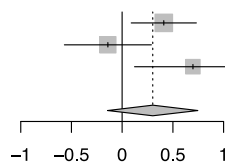
## Interleukin-6

Study	Non-survivor			Survivor			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Zhou,F	11.00	5.1111	54	6.30	2.1481	137		1.43	[1.09; 1.78]	55.2%
Wu,C	10.07	5.5111	44	6.05	1.3852	40		0.97	[0.52; 1.42]	44.8%
<b>Random effects model</b>			<b>98</b>			<b>177</b>		<b>1.23</b>	<b>[0.77; 1.68]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 61\%$ , $\tau^2 = 0.0652$ , $p = 0.11$										




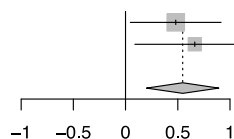
## TP

Study	Non-survivor			Survivor			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Zhou,F	12.10	1.8519	54	11.40	1.6296	128		0.41	[0.09; 0.73]	39.2%
Wu,C	11.60	1.0000	44	11.75	1.1111	40		-0.14	[-0.57; 0.29]	33.8%
Yang,X	12.90	2.9000	32	10.90	2.7000	20		0.70	[0.12; 1.27]	27.0%
<b>Random effects model</b>									<b>0.30</b>	<b>[-0.14; 0.75]</b>
Heterogeneity: $I^2 = 68\%$ , $\tau^2 = 0.1042$ , $p = 0.04$										



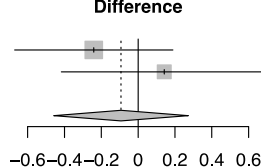
## Total bilirubin

Study	Non-survivor			Survivor			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Wu,C	14.50	7.0000	44	11.65	4.3111	40		0.48	[0.05; 0.92]	63.6%
Yang,X	19.50	11.6000	32	13.10	4.3000	20		0.66	[0.09; 1.24]	36.4%
<b>Random effects model</b>			<b>76</b>	<b>60</b>				<b>0.55</b>	<b>[0.20; 0.89]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 0\%$ , $\tau^2 = 0$ , $p = 0.62$										



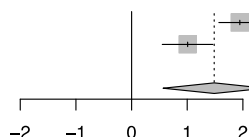
## Creatinemia

Study	Non-survivor			Survivor			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Wu,C	73.00	21.6667	44	78.65	24.8667	40		-0.24	[-0.67; 0.19]	61.4%
Yang,X	80.70	32.3000	32	76.30	27.4000	20		0.14	[-0.42; 0.70]	38.6%
<b>Random effects model</b>			<b>76</b>	<b>60</b>				<b>-0.09</b>	<b>[-0.46; 0.27]</b>	<b>100.0%</b>
Heterogeneity: $I^2 = 12\%$ , $\tau^2 = 0.0085$ , $p = 0.29$										

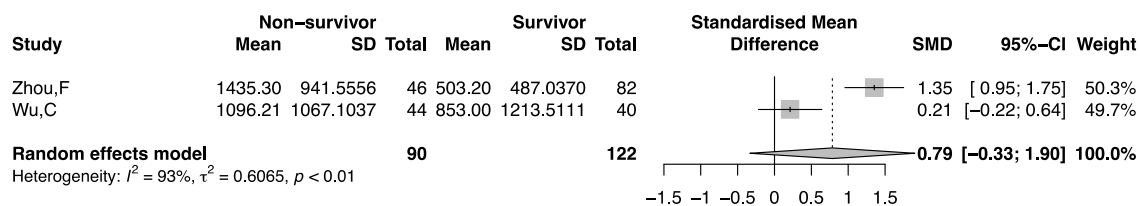


## LDH

Study	Non-survivor			Survivor			Standardised Mean Difference	SMD	95%-CI	Weight
	Mean	SD	Total	Mean	SD	Total				
Zhou,F	521.00	226.6667	54	253.50	73.3333	130		1.94	[1.57; 2.32]	51.0%
Wu,C	484.00	161.1111	44	349.50	90.7407	40		1.01	[0.55; 1.46]	49.0%
<b>Random effects model</b>			<b>98</b>						<b>1.48</b>	<b>[0.57; 2.40]</b>
Heterogeneity: $I^2 = 90\%$ , $\tau^2 = 0.3942$ , $p < 0.01$										



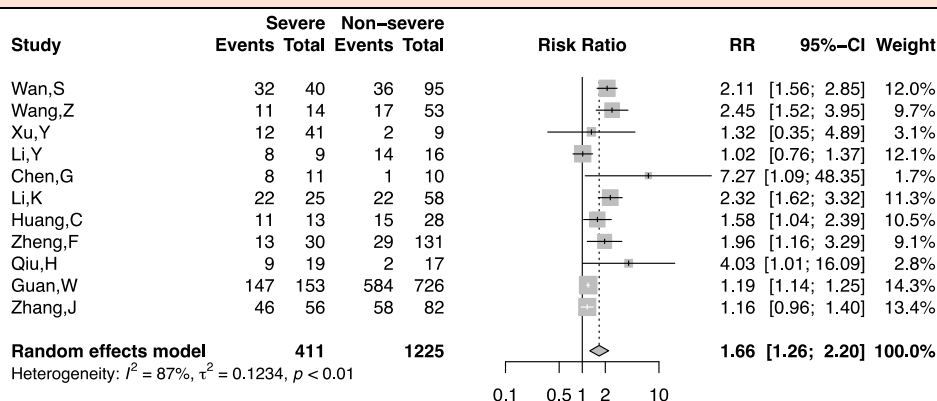
## Ferritin



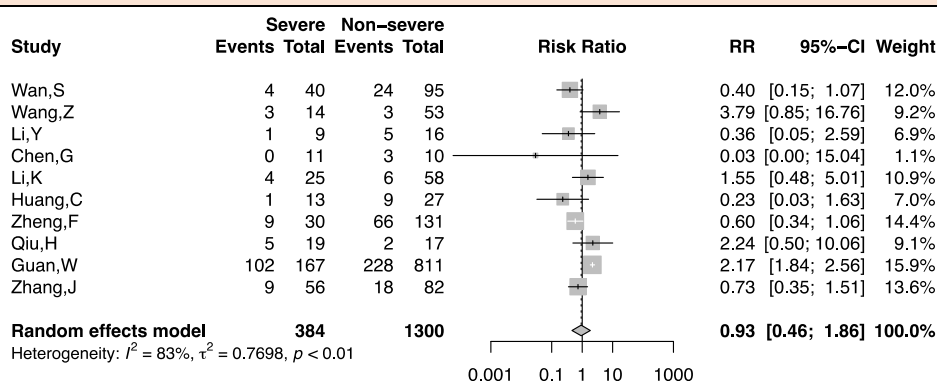
## II. Forest plot of studies reporting proportion of participants with each biomarker's abnormalities

### Odds of blood routine abnormalities

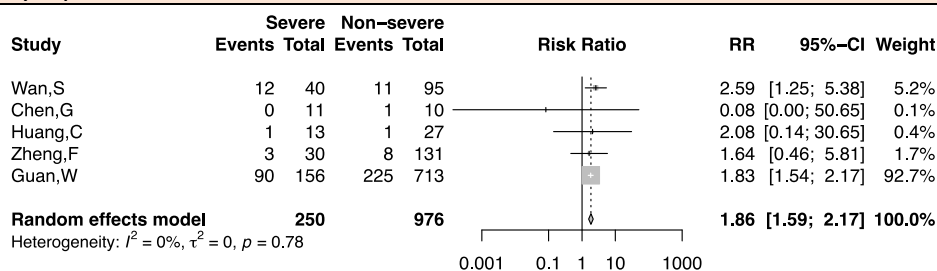
#### Lymphopenia



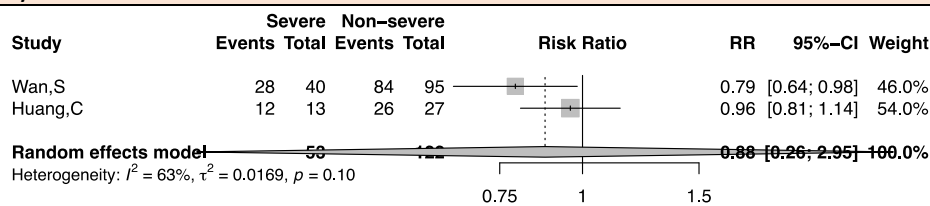
#### Leucopenia



#### Thrombocytopenia

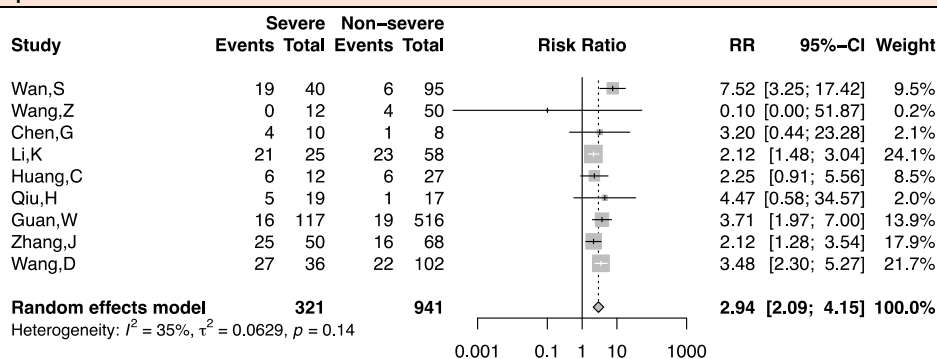


## Thrombocytosis

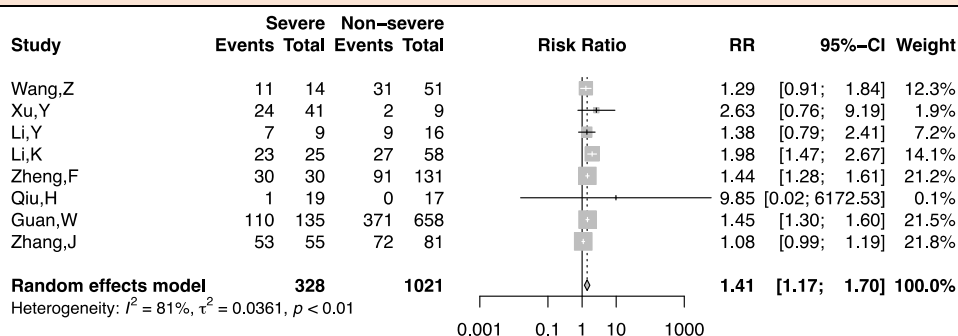


Odds of inflammatory biomarkers abnormalities

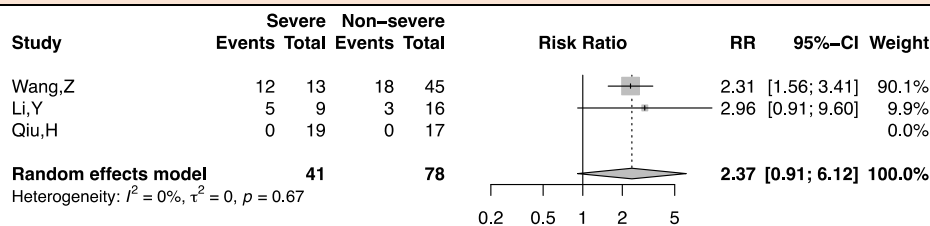
## Eleveted procalcitonin



## Eleveted CRP

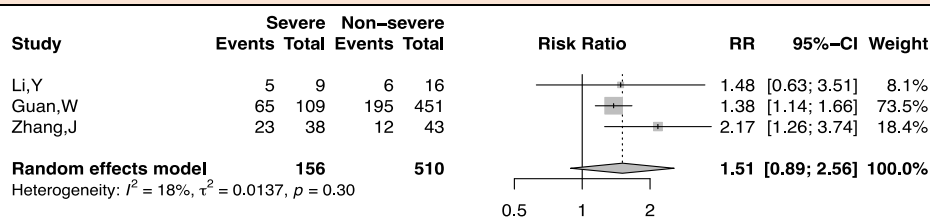


## Eleveted ESR



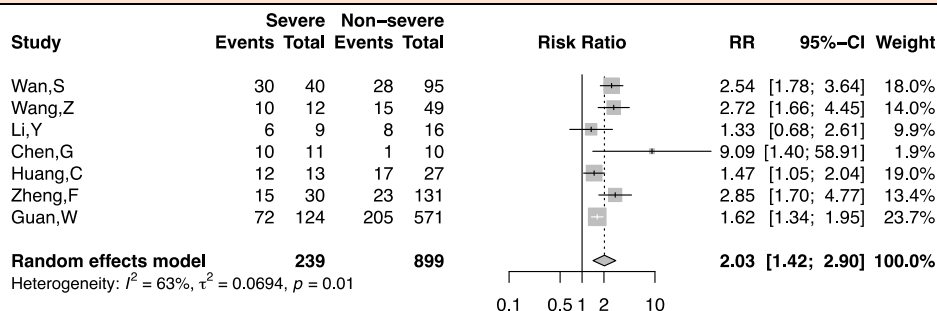
Odds of blood clothing abnormalities

## Eleveted D-dimer

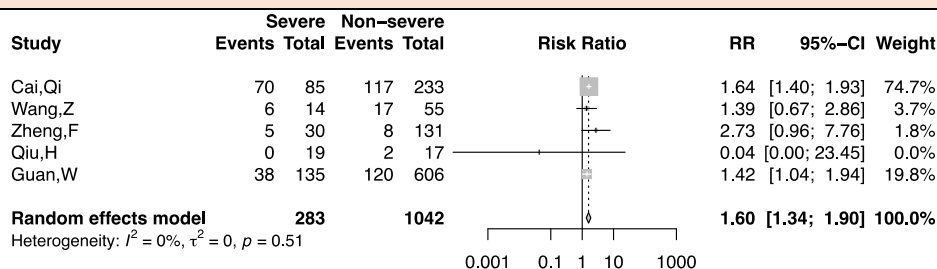


## Odss of biochemical abnormalities

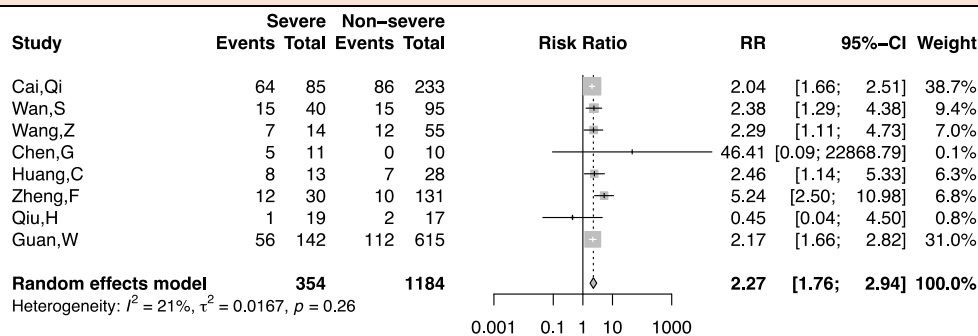
### Elevated LDH



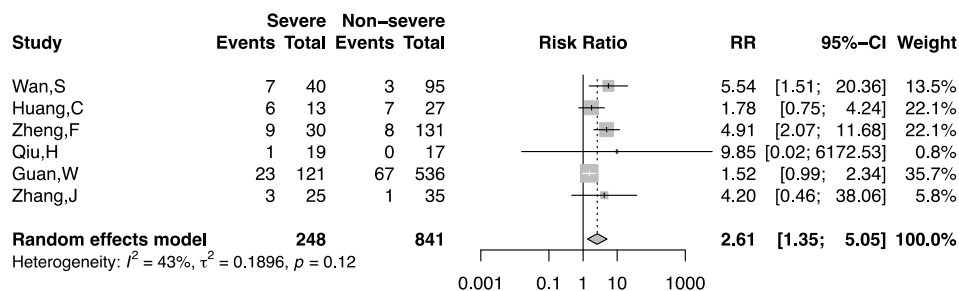
### Elevated ALAT



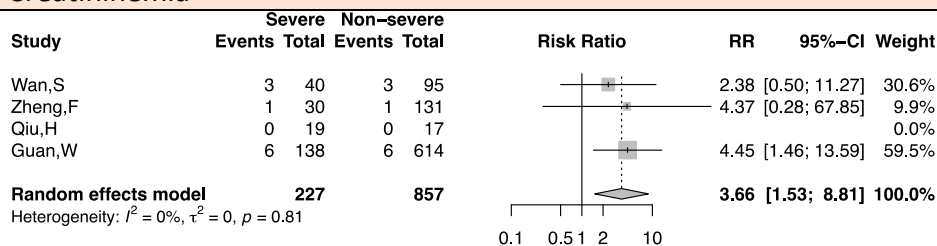
### Elevated ASAT



### Elevated CK



### Elevated Creatininemia



## Elevated total bilirubin

